

Appl. No. : 10/573,437
Filed : March 24, 2006

AMENDMENTS TO THE CLAIMS

1-7. (Canceled)

8. (Currently amended) An explosive attachment device for mechanical connections of components, internally equipped with an explosive charge, the detonation shock effect of which is strong enough for rupturing a connection forming part of the attachment device for a rapid disconnection, said attachment device comprising:

an attachment screw having a head, which extends through and interconnects the components;

an explosive attachment element adapted to receive the attachment screw, such that the interconnected components are clamped between the head of the attachment screw and the explosive attachment element;

wherein the explosive attachment element comprises a cylinder having a cover which engages one of the interconnected components, and a piston mounted in the cylinder, said piston having substantially the same a first outer diameter that is substantially the same as an inner diameter of the cylinder, and said piston being arranged inside the cylinder such that there is a substantial space between a top of the piston and the a top and bottom of the cylinder and between a bottom of the piston and a bottom of the cylinder, whereby in the space between the bottom of the piston and the bottom of the cylinder there is provided a circular row of small holes in the a wall of the cylinder at a distance from the bottom of the cylinder which is at least equal to the height of the piston at its biggest diameter;

the piston also having a rod with a substantially smaller diameter than the inner diameter of the cylinder, the rod extending in parallel to the a longitudinal mean axis of the cylinder through the cover, such that the attachment screw can be fixedly mounted in the rod; and

an explosive charge located in the cylinder in the a space between the piston and the cover, the explosive charge having a firing device which is equipped with a delay mechanism, whereby the attachment device, after a time delay, is exploded in such a manner that the blasting pressure is converted to a pulling stress, which pulls off the head of the attachment screw without splintering the a remaining part of the device.

Appl. No. : **10/573,437**
Filed : **March 24, 2006**

9. (Currently amended) The explosive attachment device of Claim 18, wherein the delay mechanism comprises a blasting fuse equipped with two igniting fuses, one positioned at each end of the blasting fuse, and an electric cable connected to one of the igniting fuses, said blasting fuse being positioned in the space between the bottom of the piston and the bottom of the cylinder and where the end of the blasting fuse having the igniting fuse which is not connected to the electric cable extends through a hole in the piston, such that the other igniting fuse will be in contact with the explosive charge.

10. (Currently amended) The explosive attachment device if Claim 18, wherein the cover further comprises a collar having a thread arranged on its inner side, such that the cylinder will not reach the a bottom of the cover but the an edge of the cylinder forms a threshold in the inner wall of the closed space.

11. (Currently amended) The explosive attachment device of Claim 18, wherein the cylinder further comprises a round locking washer, the an outer diameter of which is substantially as big as the an inner diameter of the cover, but is substantially bigger than the inner diameter of the cylinder, said locking washer having a central hole, the a diameter of which is somewhat bigger than the diameter of the rod, but substantially smaller than a collar arranged on the rod, said locking washer being fixedly mounted such that the rod extends through the central hole in the locking washer and is clamped in position against the collar of the rod by means of the piston, and wherein the piston has an a second outer diameter which at the locking washer is substantially smaller than the inner diameter of the cylinder, forming a substantial space between the locking washer and a portion of the piston.

12. (Currently amended) The explosive attachment device of Claim 18, wherein the attachment screw further comprises a washer positioned below the head of the attachment screw, and wherein the washer functions as a shearing tool.

13. (Currently amended) The explosive attachment device of Claim 29, wherein the blasting fuse is wound in spiral form in the cylinder in the space between the bottom of the piston and the bottom of the cylinder.

Appl. No. : **10/573,437**
Filed : **March 24, 2006**

14. (Previously presented) The explosive attachment device of Claim 11, wherein portions of the rod, the locking washer, and the cylinder are adapted to prevent rotation of the piston and rod relative to each other.